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By Joab Jackson

You got your folksonomy in my ontology!

If you spent any time thinking about the subject at all, you might assume the ontologists would find little use for folksonomies.

After all, an ontology describes, in strictest terms possible, the logical relationships among pre-defined elements. Ontologies demand not only precise terms for every element but also precise, logical definitions of the relationships among the elements.

A more recent phenomena, folksonomies are collections of tags that individuals apply to certain elements, such as Web pages. While ontologies adhere to rules of formal logic, folksonomies are about as informal as you can get. Each person can tag something with any words they want—there are no conventions to which you must adhere.

And yet there is no reason the two can't be used together. That was the lesson attendess might have gotten from the ontology track at this year's Interoperability Week, held by the National Institute of Standards and Technology.

One of the chief speakers at the Ontology track was Tom Gruber, who is widely considered to be the father of ontology, at least in the sense of how the concept is used within the world of the Semantic Web.

When I spoke with Gruber after his talk, I was surprised to find him a fan of folksonomies. He said that far from being mutually exclusive, ontologies and folksonomies can be used together.

Folksonomies have gained a lot of popularity in recent years, not only with such sites such as Delicious, in which people tag Web pages with their mnemonics, but also with lightly-moderated collective knowledge undertakings, such as Wikipedia.

Although it's never had the sudden mass appeal of folksonomy-like projects, ontologies have been gaining a foothold in the computer world as well. Also at the conference was Steven Ray, who is a division chief for NIST's Manufacturing Systems Integration Division. This division is largely responsible for the Process Specification Language, a set of standards for defining how a process could be described.

PSL was originally developed to describe manufacturing processes, but it has been increasingly adopted in other domains as well. Unlike most standards, PSL offers not only a set of flat specifications, but also offers formal definitions of the relationships among the elements. For instance, it has been added into the Unified Modeling Language to allow models to contain clearer representations of how the modeled process moves from one step to the next. In other words, PSL is an ontology.

Gruber said he saw four different ways of adding meta-tags to material, ranging from the loosest to the most strict:

1. Folksonomy (informal, user-defined)
2. Controlled vocabularies (the user must deploy a set of defined terms)
3. Taxonomy (Pre-defined terms in which specific terms are subsets of more general terms)
4. Ontology (A rich set of relationships is mapped out among all the terms)

Each approach answers a unique set of requirements. Far from being competing approaches, we should consider looking for ways to bring all these approaches together, Gruber noted. It was an appropriate message for interoperability week. *--Posted by Joab Jackson*

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